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EXAMINER

DUFFIELD, JEREMY S

ART UNIT

PAPER NUMBER

2427

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/629,717	<b>Applicant(s)</b> BAE ET AL.	
	<b>Examiner</b> JEREMY DUFFIELD	<b>Art Unit</b> 2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-17,20-22 and 24-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-17,20-22 and 24-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. In view of the Pre-Brief Conference Request filed on 10 November 2009, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

### ***Response to Arguments***

2. Applicant's arguments filed 10 November 2009 regarding generating and transmitting a multimedia document scheduled at the generated reference clock value with respect to the rejection(s) of claim(s) 1, 3-5, 16, 17, 19-21, 32, and 35-36 have

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been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

3. Applicant's other arguments filed 10 November 2009 have been fully considered but they are not persuasive.

In response to applicant's arguments that the given references do not teach "a reference clock...and reception locations", Page 2, lines 4-5, the examiner respectfully disagrees. Piotrowski teaches the generation and transmission of multimedia documents based on a scheduled time. For instance, a user is watching a television show and supplemental multimedia information automatically displays in a "pop-up". The SMIL documents are synchronized through the use of time codes transmitted to the client with the data. The documents include the synchronization data for the supplemental multimedia information so that when a scheduled time is reached the multimedia is automatically displayed (Para. 24, 30-40). Blackketter and Eng both teach periodically generating and transmitting reference clock values in order to maintain synchronization between a server or head-end and a receiver. Therefore, the aforementioned limitation is taught by the given references.

In response to applicant's arguments that the given references do not teach "a media data...generated multimedia document", Page 2, lines 17-19, the examiner respectfully disagrees. Piotrowski clearly teaches building a SMIL multimedia document using various types of multimedia files. The SMIL document can be composed of

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images, text, audio, and video with URLs (Para. 24-25, 30-38). Therefore, the aforementioned limitation is taught by the given references.

In response to applicant's arguments that the given references teach "the video/TV program corresponds to the 'media data' in claim 1", Page 3, lines 9-10, the examiner respectfully disagrees. As stated and cited above, Piotrowski clearly states building a SMIL multimedia document using various types of multimedia files. For instance, a user is watching a television show and supplemental multimedia information automatically displays in a "pop-up". As one can see, the TV program and the supplementary content are separate files.

In response to applicant's arguments that the given references do not teach "generat[ing] and separately transmit[ting] a clock value for any information or data", Page 3, lines 12, the examiner respectfully disagrees. Piotrowski clearly teaches the transmission of time codes. Inasmuch as the time codes being "separately" transmitted, this limitation is not included in the independent claim. Regardless, though, Blacketter and Eng both teach periodically generating and separately transmitting reference clock values.

In response to applicant's arguments that the given references teach "one-way broadcasting", page 3, lines 15-17, the examiner respectfully disagrees. Piotrowski clearly teaches a user viewing supplementary multimedia information and subsequently

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interacting with the supplementary data (Para. 35-36, 41). Furthermore, the claims do not state any type of "interactive" or two-way broadcasting.

### ***Specification***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 33-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 33 sets forth a "computer readable medium." However, the specification as originally filed does not explicitly define the computer readable medium. The United States Patent and Trademark Office (USPTO) is obliged to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. *See In re Zletz*, 893 F.2d 319 (Fed. Cir. 1989) (during patent examination the pending claims must be interpreted as broadly as their terms reasonably allow). The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of

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computer readable media, particularly when the specification is absent an explicit definition or is silent. See MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal *per se*, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. See *In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101*, Aug. 24, 2009; p. 2.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 5, 17, 19, 21 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piotrowski (US 2002/0188959) in view of Kuzma (US 5,889,950) and further in view of Eng (US 5, 963,557).

Regarding claim 1, Piotrowski teaches an apparatus for transmitting multimedia broadcasting (Fig. 1, el. 19), comprising:

a reference clock generator/transmitter, which generates and transmits a reference clock value of real-time multimedia broadcasting (Para. 25, 31-38);

a multimedia document generator/transmitter, which generates and transmits a multimedia document, i.e. web server generates and transmits synchronized SMIL documents (Para. 19, 29-38); and

a media data generator/transmitter, which generates and transmits media data used to render the generated multimedia document, i.e. web server generates and transmits supplemental multimedia information which includes audio and video (Para. 24, 29-38);

wherein the multimedia document is a synchronized multimedia integration language (SMIL) document (Para. 31-38).

Piotrowski does not clearly teach the reference clock value is a current time value of real-time multimedia broadcasting at the transmission and reception locations; and generating and transmitting a multimedia document scheduled at the generated reference clock value.

Kuzma teaches a multimedia document generator/transmitter, i.e. national or local source, which generates and transmits a multimedia document scheduled at a generated reference clock value, i.e. the broadcaster uses time stamps included in a script to schedule the generation and transmission of a web page (Col. 5, lines 10-21, 28-51; Col. 6, lines 26-34; Col. 7, lines 40-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski's multimedia document generator/transmitter to include generating and transmitting a multimedia document scheduled at the generated reference clock value, using the known



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method of using a script schedule to encode and transmit web pages at the scheduled times, as taught by Kuzma, in combination with the SMIL document generation and transmission system of Piotrowski, for the purpose of providing a more efficient method of transmitting supplemental information with a television broadcast.

Piotrowski in view of Kuzma does not clearly teach the reference clock value is a current time value of real-time multimedia broadcasting at the transmission and reception locations.

Eng teaches a reference clock generator/transmitter, which generates and transmits a reference clock value, which is a current time value of real-time multimedia broadcasting at the transmission and reception locations, i.e. a synchronizer located at a head-end maintains a system clock and periodically broadcasts time stamps to the subscriber stations in order to maintain synchronization between the head-end and the stations (Col. 17, lines 22-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the reference clock generator/transmitter of Piotrowski in view of Kuzma to generate and transmit a reference clock value which is a current time value of real-time multimedia broadcasting at the transmission and reception locations, using the known method of generating and periodically transmitting a locally generated system clock value to subscriber stations in order to ensure synchronization, as taught by Eng, in combination with the system taught by Piotrowski in view of Kuzma,

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for the purpose of providing the user with a better overall viewing experience by having the receiver synchronized to the clock at the transmitter, thereby reducing lag time and errors.

Regarding claim 3, Piotrowski (Para. 31-38) in view of Kuzma (Col. 5, lines 40-51; Col. 7, lines 40-47) in view of Eng (Col. 17, lines 22-46) teaches the reference clock generator/transmitter, the multimedia document generator/transmitter, and the media data generator/transmitter transmit the reference clock value, the multimedia document, and the media data, respectively, in the form of a predetermined data stream, i.e. transmitting the current date and time, the SMIL document, and the linked media.

Regarding claim 5, Piotrowski in view of Kuzma in view of Eng teaches the reference clock generator/transmitter transmits the reference clock value, which increases by a predetermined value, whenever the reference clock value increases by the predetermined value, i.e. periodically broadcasting the current time to the receiver (Eng-Col. 17, lines 22-46).

Regarding claim 17, claim is analyzed with respect to claim 1. Piotrowski in view of Kuzma in view of Eng further teaches the generating of the reference clock value, the multimedia document, and the media data, respectively, are

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carried out by at least one processor (Piotrowski-Fig. 1, el. 50; Eng-Col. 17, lines 8-14).

Regarding claim 19, claim is analyzed with respect to claim 3.

Regarding claim 21, claim is analyzed with respect to claim 5.

Regarding claim 35, Piotrowski (Para. 42-45) in view of Kuzma in view of Eng teaches a computer-readable recording medium in which a program for executing the method of claim 17 in a computer is recorded.

Regarding claim 36, Piotrowski (Para. 32-37) in view of Kuzma in view of Eng teaches the media data generator/transmitter generates and transmits media data separately from the generated multimedia document, i.e. the multimedia document contains the URLs that link to the media data.

9. Claims 6, 8, 10-15, 22, 24, 26-31, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piotrowski in view of Blacketter (US 6,415,438) and further in view of Eng.

Regarding claim 6, Piotrowski teaches an apparatus for receiving multimedia broadcasting (Fig. 1, el. 11, 12, 14), comprising:

a reference clock receiver, which receives a reference clock value of real-time multimedia broadcasting, i.e. receiving a time code embedded in the media (Para. 25, 31-38);

a multimedia document receiver, which receives a first multimedia document (Para. 19, 25, 28, 31-38, 45);

a media data receiver, which receives first media data, i.e. media data may be recorded (Para. 19, 25, 28, 31-38, 44-45); and

a multimedia document renderer, which when the first multimedia document is scheduled at the reference clock value and first media data is a rendering material used to render the first multimedia document, renders the first multimedia document using the first media data (Para. 30-38);

wherein the multimedia document is a synchronized multimedia integration language (SMIL) document (Para. 31-38).

Piotrowski does not clearly teach the reference clock value is a current time value of real-time multimedia broadcasting at the transmission and reception locations; a multimedia document receiver/storage, which receives and stores a multimedia document; and a media data receiver/storage, which receives and stores first media data.

Blackketter teaches a reference clock generator/transmitter, which generates and transmits a reference clock value, which is a current time value of multimedia broadcasting and using the time to schedule multimedia, i.e. the current date and time can be periodically broadcasted to the receiver unit (Col. 5,

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lines 5-40); and a multimedia document receiver/storage, which receives and stores a multimedia document (Col. 6, line 60-Col. 7, line 7); and a media data receiver/storage, which receives and stores first media data, i.e. prefetching web page content using triggers (Col. 6, line 60-Col. 7, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski to include generating and transmitting a reference clock value which is a current time value of real-time multimedia broadcasting; the multimedia document receiver/storage, which receives and stores a multimedia document; and a media data receiver/storage, which receives and stores first media data, using the known trigger and prefetching method of Blackketter, for the purpose of eliminating the need for a trigger script and delay loop by using wall-clock time with a trigger transmitted before its associated execution time (Blackketter-Col. 2, lines 39-50).

Eng teaches a synchronizer located at a head-end that maintains a system clock and periodically broadcasts time stamps to the subscriber stations in order to maintain synchronization between the head-end and the stations (Col. 17, lines 22-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the reference clock generator/transmitter of Piotrowski in view of Blackketter to generate and transmit a reference clock value which is a current time value of real-time multimedia broadcasting at the transmission and reception locations, using the

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known method of generating and periodically transmitting a locally generated system clock value to subscriber stations in order to ensure synchronization, as taught by Eng, in combination with the system taught by Piotrowski in view of Blackketter, for the purpose of providing the user with a better overall viewing experience by having the receiver synchronized to the clock at the transmitter, thereby reducing lag time and errors.

Regarding claim 8, Piotrowski (Para. 31-38) in view of Blackketter (Col. 5, lines 5-40) in view of Eng (Col. 17, lines 22-46) teaches the reference clock receiver, the multimedia document receiver/storage, and the media data receiver/storage receive the reference clock value, the first multimedia document, and the first media data, respectively, in the form of a predetermined data stream, i.e. transmitting the current date and time, the SMIL document, and the linked media.

Regarding claim 10, Piotrowski in view of Blackketter in view of Eng teaches the reference clock generator/transmitter transmits the reference clock value, which increases by a predetermined value, whenever the reference clock value increases by the predetermined value, i.e. periodically broadcasting the current time to the receiver (Blackketter-Col. 5, lines 21-33; Eng-Col. 17, lines 22-46).

Regarding claim 11, Piotrowski in view of Blackketter in view of Eng teaches a first multimedia document is not scheduled at a reference clock value, a multimedia document renderer stands by until receipt of a predetermined reference clock value at which the first multimedia document is scheduled, i.e. the SMIL document media components are scheduled and synchronized using broadcasted trigger time codes (Piotrowski-Para. 31-38; Blackketter-Col. 5, lines 5-40; Eng-Col. 17, lines 22-46).

Regarding claim 12, Piotrowski in view of Blackketter in view of Eng teaches transmitting a trigger, which contains a future presentation time attribute and a URL, prefetching the information resource contained at the URL, and executing the trigger at the future time (Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25). Therefore, Piotrowski in view of Blackketter in view of Eng teaches when the first multimedia document is scheduled at the reference clock value but the first media data is not a rendering material used to render the first multimedia document, the multimedia document renderer holds the first media data in standby and then uses the first media data when rendering a second multimedia document, whose rendering material is the first media data and which is scheduled at a predetermined reference clock value, i.e. rendering the multimedia document and its associated media data at the scheduled time (Piotrowski-Para. 28; Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25; Eng-Col. 17, lines 22-46).

Regarding claim 13, Piotrowski in view of Blackketter in view of Eng teaches transmitting a trigger, which contains a future presentation time attribute and a URL, prefetching the information resource contained at the URL, and executing the trigger at the future time (Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25). Therefore, Piotrowski in view of Blackketter in view of Eng teaches when a first multimedia document under rendering is not scheduled at a predetermined increasing reference clock value, i.e. the trigger has expired or the multimedia document is finished (Blackketter-Col. 8, lines 15-49; Col. 10, lines 44-50), the multimedia document renderer stops rendering the first multimedia document and then renders a second multimedia document scheduled at the predetermined increasing reference clock value when the second multimedia document has been stored, i.e. the trigger for the new multimedia document is executed and the document is rendered (Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25; Eng-Col. 17, lines 22-46).

Regarding claim 14, Piotrowski in view of Blackketter in view of Eng teaches transmitting a trigger, which contains a future presentation time attribute and a URL, prefetching the information resource contained at the URL, and executing the trigger at the future time (Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25). Therefore, Piotrowski in view of Blackketter in view of Eng teaches when a first multimedia document under rendering is not scheduled at a



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predetermined increasing reference clock value, i.e. the trigger has expired or the multimedia document is finished (Blackketter-Col. 8, lines 15-49; Col. 10, lines 44-50), the multimedia document renderer stops rendering the first multimedia document and then receives and stores a second multimedia document scheduled at the predetermined increasing reference clock value when the second multimedia document has not been stored (Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25; Eng-Col. 17, lines 22-46).

Regarding claim 15, Piotrowski in view of Blackketter in view of Eng teaches transmitting a trigger, which contains a future presentation time attribute and a URL, prefetching the information resource contained at the URL, and executing the trigger at the future time (Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25). Therefore, Piotrowski in view of Blackketter in view of Eng teaches when a first multimedia document under rendering is not scheduled at a predetermined increasing reference clock value, i.e. the trigger has expired or the multimedia document is finished (Blackketter-Col. 8, lines 15-49; Col. 10, lines 44-50), the multimedia document renderer stops rendering the first multimedia document and then receives and stores second media data used to render a second multimedia document scheduled at the predetermined increasing reference clock value when the second multimedia document has been stored, but the second media data has not been stored, i.e. the second multimedia

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document has been prefetched (Piotrowski-Para. 28; Blackketter-Col. 5, lines 5-40; Col. 6, line 60-Col. 7, line 25; Eng-Col. 17, lines 22-46).

Regarding claim 22, claim is analyzed with respect to claim 6. Piotrowski in view of Blackketter in view of Eng further teaches the generating of the reference clock value, the multimedia document, and the media data, respectively, are carried out by at least one processor (Piotrowski-Fig. 1, el. 50; Eng-Col. 17, lines 8-14).

Regarding claim 24, claim is analyzed with respect to claim 8.

Regarding claim 26, claim is analyzed with respect to claim 10.

Regarding claim 27, claim is analyzed with respect to claim 11.

Regarding claim 28, claim is analyzed with respect to claim 12.

Regarding claim 29, claim is analyzed with respect to claim 13.

Regarding claim 30, claim is analyzed with respect to claim 14.

Regarding claim 31, claim is analyzed with respect to claim 15.

Regarding claim 37, Piotrowski (Para. 28, 32-37) in view of Blacketter in view of Eng teaches the media data receiver/storage receives and stores first media data separately from the multimedia document, i.e. the multimedia document contains the URLs that link to the media data.

10. Claims 16 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piotrowski in view of Kuzma in view of Blacketter and further in view of Eng.

Regarding claim 16, Piotrowski teaches an apparatus for transmitting multimedia broadcasting (Fig. 1, el. 19),

which generates and transmits a reference clock value of real-time multimedia broadcasting (Para. 25, 31-38);

a multimedia document, i.e. web server generates and transmits synchronized SMIL documents (Para. 19, 29-38); and

media data used to render the generated multimedia document, i.e. web server generates and transmits supplemental multimedia information which includes audio and video (Para. 24, 29-38); and

an apparatus for receiving multimedia broadcasting (Fig. 1, el. 11, 12, 14), which receives the reference clock value of real-time multimedia broadcasting, i.e. receiving a time code embedded in the media (Para. 25, 31-38);

receives the multimedia document, (Para. 19, 25, 28, 31-38, 45); and

the media data, i.e. media data may be recorded (Para. 19, 25, 28, 31-38, 44-45); and

when the multimedia document is scheduled at the reference clock value and the media data is a rendering material used to render the multimedia document, renders the multimedia document using the media data (Para. 30-38);

wherein the multimedia document is a synchronized multimedia integration language (SMIL) document (Para. 31-38).

Piotrowski does not clearly teach the reference clock value is a current time value of real-time multimedia broadcasting at the transmission and reception locations; generating and transmitting a multimedia document scheduled at the generated reference clock value; and an apparatus that stores the multimedia document and the media data.

Kuzma teaches a multimedia document generator/transmitter, i.e. national or local source, which generates and transmits a multimedia document scheduled at a generated reference clock value; and an apparatus that receives the multimedia document, i.e. the broadcaster uses time stamps included in a script to schedule the generation and transmission of a web page (Col. 5, lines 10-21, 28-51; Col. 6, lines 26-34; Col. 7, lines 40-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski's multimedia document generator/transmitter to include generating and transmitting a multimedia document scheduled at the generated reference clock value, using the known

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method of using a script schedule to encode and transmit web pages at the scheduled times, as taught by Kuzma, in combination with the SMIL document generation and transmission system of Piotrowski, for the purpose of providing a more efficient method of transmitting supplemental information with a television broadcast.

Piotrowski in view of Kuzma does not clearly teach the reference clock value is a current time value of real-time multimedia broadcasting at the transmission and reception locations; and an apparatus that stores the multimedia document and the media data.

Blackketter teaches a reference clock generator/transmitter, which generates and transmits a reference clock value, which is a current time value of multimedia broadcasting and using the time to schedule multimedia, i.e. the current date and time can be periodically broadcasted to the receiver unit (Col. 5, lines 5-40); an apparatus that receives and stores the multimedia document, and the media data, i.e. prefetching web page content using triggers (Col. 6, line 60-Col. 7, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski in view of Kuzma to include generating and transmitting a reference clock value which is a current time value of real-time multimedia broadcasting; and a multimedia document receiver/storage; and an apparatus that stores the multimedia document and the media data, using the known trigger method of Blackketter, for the purpose of

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eliminating the need for a trigger script and delay loop by using wall-clock time with a trigger transmitted before its associated execution time (Blackketter-Col. 2, lines 39-50).

Eng teaches a reference clock generator/transmitter, which generates and transmits a reference clock value, which is a current time value of real-time multimedia broadcasting at the transmission and reception locations, i.e. a synchronizer located at a head-end maintains a system clock and periodically broadcasts time stamps to the subscriber stations in order to maintain synchronization between the head-end and the stations (Col. 17, lines 22-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the reference clock generator/transmitter of Piotrowski in view of Kuzma in view of Blackketter to generate and transmit a reference clock value which is a current time value of real-time multimedia broadcasting at the transmission and reception locations, using the known method of generating and periodically transmitting a locally generated system clock value to subscriber stations in order to ensure synchronization, as taught by Eng, in combination with the system taught by Piotrowski in view of Kuzma in view of Blackketter, for the purpose of providing the user with a better overall viewing experience by having the receiver synchronized to the clock at the transmitter, thereby reducing lag time and errors.

Regarding claim 32, claim is analyzed with respect to claim 16. Piotrowski in view of Kuzma in view of Blacketter in view of Eng further teaches the generating of the reference clock value, the multimedia document, and the media data, respectively, are carried out by at least one processor (Piotrowski-Fig. 1, el. 50; Eng-Col. 17, lines 8-14).

11. Claims 4, 20, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piotrowski in view of Kuzma in view of Eng and further in view of the Real-Time Streaming Protocol Specification (RFC 2326).

Regarding claim 4, Piotrowski in view of Kuzma in view of Eng teaches all elements of claims 1 and 3.

Piotrowski in view of Kuzma in view of Eng teaches communication with a network using well-known conventional communication protocols (Piotrowski-Para. 22).

Piotrowski in view of Kuzma in view of Eng does not clearly teach the predetermined data stream is composed of type information, time slot information, payload length information, and payload information, the type information indicates whether the predetermined data stream is for the reference clock value, the multimedia document, or the media data, the time slot information indicates a broadcasting time zone in which the reference clock value, the multimedia document, or the media data is scheduled, the payload length information indicates the length of the payload information, and the

payload information is substantial data information of the reference clock value, the multimedia document, or the media data.

The RTSP Specification teaches an RTSP response can be composed of type information, (Page 7; Page 30, Sec. 10.2; Page 49, Sec. 12.16, 12.18, 12.19; Page 52, Sec. 12.29; Page 53, Sec. 12.33; Page 79, Sec. C.1.1; Page 80, Sec. C.1.2, C.1.3), time slot information, i.e. range of presentation or time of availability (Page 52, Sec. 12.29; Page 81, Sec. C.1.5, C.1.6), payload length information, i.e. content length (Page 30, Sec. 10.2; Page 49, Sec. 12.14), and payload information, i.e. entity (Page 30, Sec. 10.2; Page 26, Sec. 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski in view of Kuzma in view of Eng to include teach the predetermined data stream is composed of type information, time slot information, payload length information, and payload information, the type information indicates whether the predetermined data stream is for the reference clock value, the multimedia document, or the media data, the time slot information indicates a broadcasting time zone in which the reference clock value, the multimedia document, or the media data is scheduled, the payload length information indicates the length of the payload information, and the payload information is substantial data information of the reference clock value, the multimedia document, or the media data, as taught by the RTSP Specification, for the purpose of using a well-known and established communication protocol.



Regarding claim 20, claim is analyzed with respect to claim 4.

Regarding claim 33, claim is analyzed with respect to the combination of claims 1 and 4.

Regarding claim 34, Piotrowski in view of Blackketter in view of Eng in view of the Real-Time Streaming Protocol Specification teaches the type information, the time slot information, the payload length information, and the payload information are sequentially arranged. It would have been obvious to one of ordinary skill in the art at the time the invention was made because sequentially arranging the type information, the time slot information, the payload length information, and the payload information is a predictable variation of the RTSP standard. This enables the receiver to quickly process the RTSP header fields.

12. Claims 9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piotrowski in view of Blackketter in view of Eng and further in view of the Real-Time Streaming Protocol Specification (RFC 2326).

Regarding claim 9, Piotrowski in view of Blackketter in view of Eng teaches all elements of claims 6 and 8.

Piotrowski in view of Blackketter in view of Eng teaches communication with a network using well-known conventional communication protocols (Piotrowski-Para. 22).

Piotrowski in view of Blackketter in view of Eng does not clearly teach the predetermined data stream is composed of type information, time slot information, payload length information, and payload information, the type information indicates whether the predetermined data stream is for the reference clock value, the multimedia document, or the media data, the time slot information indicates a broadcasting time zone in which the reference clock value, the multimedia document, or the media data is scheduled, the payload length information indicates the length of the payload information, and the payload information is substantial data information of the reference clock value, the multimedia document, or the media data.

The RTSP Specification teaches an RTSP response can be composed of type information, (Page 7; Page 30, Sec. 10.2; Page 49, Sec. 12.16, 12.18, 12.19; Page 52, Sec. 12.29; Page 53, Sec. 12.33; Page 79, Sec. C.1.1; Page 80, Sec. C.1.2, C.1.3), time slot information, i.e. range of presentation or time of availability (Page 52, Sec. 12.29; Page 81, Sec. C.1.5, C.1.6), payload length information, i.e. content length (Page 30, Sec. 10.2; Page 49, Sec. 12.14), and payload information, i.e. entity (Page 30, Sec. 10.2; Page 26, Sec. 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Piotrowski in view of Blackketter in

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view of Eng to include teach the predetermined data stream is composed of type information, time slot information, payload length information, and payload information, the type information indicates whether the predetermined data stream is for the reference clock value, the multimedia document, or the media data, the time slot information indicates a broadcasting time zone in which the reference clock value, the multimedia document, or the media data is scheduled, the payload length information indicates the length of the payload information, and the payload information is substantial data information of the reference clock value, the multimedia document, or the media data, as taught by the RTSP Specification, for the purpose of using a well-known and established communication protocol.

Regarding claim 25, claim is analyzed with respect to claim 9.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY DUFFIELD whose telephone number is (571)270-1643. The examiner can normally be reached on Mon.-Fri. 8:00 A.M.-5:30 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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17 February 2010

JSD

/Scott Beliveau/

Supervisory Patent Examiner, Art Unit 2427